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- at an intersection of a boundary of the first polygon with a boundary of the second polygon, determining a first known portion of a boundary of the polygonal intersection as comprised of a portion of the boundary of the first polygon that is located inside the second polygon; and

2. The method of Claim 1 wherein the first polygon, the second polygon and the polygonal intersection are represented by data indicating a list of edges.

4. The method of Claim 2 wherein the edges in the list of edges are consistently ordered in either a clockwise or counterclockwise direction.

6. The method of Claim 5 wherein the edges in the list of edges that represent a hole are ordered in an opposite direction to the direction used to order the edges in the list of edges used to represent the first polygon.

1           7.       The method of Claim 2 wherein the edges in the list of edges are  
2 consistently ordered in a clockwise direction.

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4           8.       The method of Claim 1 wherein the first polygon and the second polygon  
5 represent two-dimensional geographic features.

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7           9.       The method of Claim 1 wherein the steps of determining are performed by  
8 a software program that uses a geographic database containing data representations of the  
9 first polygon and the second polygon.

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11 *Sub 944* 10.       The method of Claim 1 wherein the portion of the boundary of the first  
12 polygon that is located inside the second polygon is determined by comparing an angle  
13 formed by the portion of the boundary of the first polygon with portions of the boundary  
14 of the second polygon formed by the intersection.

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16           11.       The method of Claim 1 wherein the intersection of the boundary of the  
17 first polygon with the boundary of the second polygon is found by searching a  
18 rectangular area formed by an intersection of a first minimum bounding rectangle  
19 encompassing the first polygon and a second minimum bounding rectangle encompassing  
20 the second polygon.

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22           12.       The method of Claim 1 further comprising:  
23 determining an additional polygonal intersection of the first polygon and the  
24 second polygon by performing the determining steps for any additional intersection of the  
25 boundary of the first polygon with the boundary of the second polygon which is not  
26 already part of the polygonal intersection of a first polygon and a second polygon already  
27 determined.

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29           13.       The method of Claim 1 wherein the steps of determining are performed on  
30 a server connected to the Internet and that provides navigation-related services to users.

14. A program for determining a polygonal intersection of a first polygon and a second polygon, wherein said program is stored on a computer-readable medium, said program comprising:

program code that determines a first known portion of a boundary of the polygonal intersection as being comprised of a portion of a boundary of the first polygon that is located inside the second polygon at an intersection of the boundary of the first polygon with a boundary of the second polygon; and

program code that determines each subsequent portion of the boundary of the polygonal intersection that connects to a current known portion of the boundary of the polygonal intersection by selecting that portion of the boundary either the first polygon or the second polygon that connects to a leading end of the current known portion of the boundary of the polygonal intersection and that forms a minimum rotation angle therewith.

15. The invention of Claim 14 wherein said program is run on a server connected to the Internet that provides navigation-related services to users.

16. The invention of Claim 14 wherein said polygons represent two dimensional geographic features.

17. The invention of Claim 14 wherein said polygons are represented by data contained in a database that represents geographic features.

18. A method for determining a polygonal intersection of a first polygon and a second polygon represented by data contained in a geographic database,

wherein a boundary of the first polygon is represented by a first list of links connected at endpoints thereof and the second polygon is represented by a second list of links connected at endpoints thereof,

wherein an endpoint of a link is represented by either a node or a shape point;



1 direction of travel that link that forms a minimum rotation angle with the currently known  
2 link.

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4 19. The method of Claim 18 wherein the steps of determining, associating,  
5 identifying and using are performed by a software program that uses the geographic  
6 database.

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8 20. The method of Claim 18 wherein the steps of determining, associating,  
9 identifying and using are performed on a server connected to the Internet and that  
10 provides navigation-related services to users.

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